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GREFENSTEIN et al. S.N. 08/987,775

OA December 15, 2005

REMARKS:

Claims 24, 26, 30-31, 34, 41 and 43 are currently pending. Claims 24, 41 and 43 are amended.

NDDQ LLP

Rejections under 35 USC §103

The Examiner rejected the instant pending claims for being obvious in light of Fischer et al. or Rosenau et al., each in light of Sallmetall, Ellison, Trabert, Endoh, McDonagh or Tsai. The Examiner states in the instant Office Action that laminated sheets having substrates that are recited in Claims 24, 41 and 43 are disclosed in Rosenau at al. and Fischer et al. and that protective top layers made from PMMA or SAN are disclosed in the other cited documents. The Examiner is of the opinion that a person of ordinary skill in the art would be motivated with the expectation of success to combine the cited references in order to end up with the instant claimed invention. In light of the instant amended Claims, Applicants respectfully disagree.

Fischer et al. discloses a thermoplastic molding material consisting of an elastomeric grafting base, a shell grafted onto the grafting base, a-tocopherol and a thiodipropionic ester. Rosenau et al. discloses shaped articles from thermoplastic molding materials.

In contrast to the disclosure of Rosenau et al., amended claims 24, 41 and 43 recite a larminated sheet or film comprising a substrate layer comprising 1) as component A, a graft copolymer of 1 to 99% by weight of a particulate graft base comprising at least one C₁₋₈-alkyl ester of acrylic acid, at least one polyfunctional crosslinking monomer, and a graft comprising units of styrene, substituted styrene or a (meth)acrylate, and units of acrylomitrile or methacrylonitrile, 2) as component B a copolymer of styrene, a substituted styrene or a (meth)acrylate, and acrylonitrile or methacrylonitrile, and 3) as component C a polycarbonate, and a transparent top layer of either a polymethylmethacrylate (claims 24 and 31), or of a styrene-acrylonitrile copolymer (claim 41).

Further, the disclosures of Rosenau at al. and Fischer et al. each fail to teach or suggest component C laminated sheets or films of the instant claims comprised of a polycarbonate in the substrate layer. In addition, the cited art fails to teach or suggest the laminated sheets of films according to the instant invention comprising top layers either made from PMMA or made from SAN. The presence of polycarbonate as component C in the substrate layer and of a top layer made from PMMA or SAN in a thermoplastic molding recited in the instant amended Claims is

not taught or suggested in the references cited by the Examiner or in a combination of said references. Accordingly, one of ordinary skill in the art would not have been motivated to combine with the expectation of success the art cited by the Examiner to practice the instant invention.

Sallmetall et al. discloses a light transmitting cover foil made of three layers that is arranged to adhere to a surface, for example the surface of a carrier plate. Said cited art fails to teach a laminated sheet or film as it is claimed in the instant amended Claims. One of ordinary skill in that art would not be motivated to use with the expectation of success, said cited art disclosure to combine or modify said disclosure to practice a laminated sheet or film as claimed in the instant amended Claims. Said artisan would not be motivated to practice a substrate layer made of a combination of a graft copolymer, a copolymer made of styrene, substituted styrene or a (meth)acrylate, acrylonitrile or methacrylonitrile and a polycarbonate, and a transparent top layer made of PMMA or SAN, because Sallmetall et al. fails to teach or suggest the instant combination of Components A, B and C, and the transparent top layer of the instant invention.

Although Sallmetall et al. does teach a light-transmitting cover foil containing PMMA in one of its three layers, at the time of filing, one of ordinary skill in the art would not have applied PMMA or SAN as a top layer. The Examiner is directed to the Declaration of Dr. Achim Grefenstein of 9 September 2003 wherein Dr. Grefenstein discusses the unexpected results of increased gloss and scratch resistance. Previously, the Examiner had dismissed these comments. Applicants assert that these unexpected results of greater gloss and scratch resistance were unknown to one of ordinary skill in the art at the time of filing and as such, there would have been no motivation to combine or modify the art cited by the examiner to practice the instant invention because one of ordinary skill would not have known of said unexpected properties.

Additionally and relating to the aforementioned unexpected results, an advantage of having a polycarbonate in the substrate layer can be clearly seen in table 2 of the instant Specification. The penetration energy of sheets practiced according to the instant invention, rows 1-3 of table 2 on page 34, is compared to a sheet made according to the instant invention, but without polycarbonate, row 4 of table 2. The penetration energy of sheets practiced according to the present invention is between 21.3 and 31.7 Nm, whereas the penetration energy drops to 10.6 Nm when polycarbonate is not present. Therefore, these experimental data show that the presence of a polycarbonate has a significant impact on penetration energy of the sheets.

The advantage of a polycarbonate in respect to the durability of gloss of sheets that are practiced according to the instant invention is shown by examples 2, 3 and 4 in the table of Appendix A of the Declaration of Dr. Grefenstein. Examples 2, 3 and 4 have a high starting gloss at 20° of 80, 100 and 101. The gloss only drops after weathering for 1500 h to values of 76, 100 and 99. Further, after extended weathering for 3000 h, the gloss only drops to values of 75, 90 and 93. Accordingly, these experimental data show that the presence of polycarbonate in the substrate layer helps stabilize the gloss of sheets practiced according to the instant amended Claims.

Further, the Examiner dismisses Applicants unexpected results by stating on page 16 of the instant Office Action that "the table [] do not contain examples across the entirety of the claimed range with respect to components A-D." The Examiner is reminded that the MPEP 2144.08 B clearly states that "[w]hen considering whether proffered evidence is commensurate in scope with the claimed invention, Office personnel should not require the applicant to show unexpected results over the entire range of properties possessed by a chemical compound or composition." (See also, In re Chupp, 816 F.2d 643, 646 (Fed. Cir. 1987)) (emphasis added). Thus applying the MPEP and the Federal Circuit, the Examiner has impermissibly deemed Applicants critical unexpected results not persuasive because said critical unexpected results fail to contain examples over the entire range. Accordingly, Applicants respectfully request reconsideration of said results in light of aforementioned argument.

Ellison et al. discloses a flexible composite surfacing film and a method for producing the same. The composite surfacing film according to said cited art is made of a flexible temporary carrier film and a flexible transparent outer polymer clear coat layer bonded to said carrier film. The cited art reference fails to teach or suggest the combination of components A, B and a polycarbonate as component C, with a top layer of PMMA or SAN as recited in the instant Claims. Because said components are not taught or suggested in said cited art, one of ordinary skill in the art would not have been motivated to combine or modify said cited art with the expectation of success to practice the instant invention. Moreover, one of ordinary skill in the art would not have been motivated to combine said cited art teaching a transparent layer made from acrylic resin and a fluorinated polymer with Rosenau at al. and/or Fischer et al. wherein polycarbonate C is missing to practice a laminated sheet or film having a substrate layer made of components A, B and C, and a top layer made from PMMA or SAN as recited in the instant

amended Claims.

Endoh et al. discloses that an extrusion laminated product can be obtained by coextrusion of at least three layers, wherein at least one of the surface layers comprises polyvinylidene fluoride, the substrate layer comprises either polyvinylidene and the substrate layer comprises a thermoplastic layer, made of a conventional thermoplastic resin like polyvinyl chloride resin, a polycarbonate resin or an acrylonitrile-butadiene-styrene resin. Said cited art fails to teach the specific combination of components A, B and C in the substrate layer in addition to a top layer of PMMA or SAN — all without fluorinated polymers. There is no suggestion to combine or modify said cited art in order to practice the instant invention. In this regard, Endoh appears to actually teach away from the instant claimed invention. As the Federal circuit has explained:

It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art. Bausch & Lomb, Inc., v. Barnes-Hind/Hydrocurve, Inc., 796, F.2d 443, 448 (Fed. Cir. 1986) (quoting In re Wesslau, 355 F. 2d 238, 241 (CCPA 1965)

Endoh et al. teaches fluorinated polymers. Endoh et al. and Rosenau at al. and/or Fischer et al. cannot be combined in the Office Action unless one ignores that Endoh et al. teaches against using the specific combination and arrangement of components A, B and C in the substrate layer in addition to a top layer of PMMA or SAN by teaching a fluorinated polymer. Endoh et al. and Rosenau at al. and/or Fischer cannot be combined unless one picks and chooses only certain teachings "to the exclusion of other parts necessary to the full appreciation at what [cited art] fairly suggests to one skilled in the art." Accordingly, Applicants submit that the combination of the cited art proposed in the Office Action is contrary to §103 (a), the MPEP and established Federal Circuit precedent.

All the references cited by the Examiner alleging to teach one of ordinary skill in the art that a top layer of a substrate layer made of a thermoplastic polymer can be made of PMMA or SAN do not teach or suggest, alone or in combination, that top layers of PMMA or SAN can be applied to substrate layers made from the specific combination of components A, B and C as recited in the instant amended Claims. None of the cited art references teach or suggest, alone or in combination, that substrate layers containing polycarbonates should be covered with PMMA or SAN.

Moreover, a person of ordinary skill in the art who adopted the Examiner's rationale could not reasonably expect to arrive at a useful (co)extruded laminate sheet or film by merely picking and choosing different layers from various sources of cited art. It is well known in the art pertaining to layered laminate sheets or film that the properties which are inherent in the material which is employed as one of the layers are not necessarily conveyed to a composite which comprises a layer made from the material. In order to successfully incorporate a layer of a different material into a composite it is also necessary for that different material to adhere to the adjacent layers of the composite material such that a permanent connection is provided. The importance of the question whether a layer which is made from a different material is compatible with its neighboring layers is, for example, illustrated by peeling tests and adhesion tests which are used to determine the suitability of the laminates. The Examiner has failed to demonstrate that the cited art has taught or suggested, alone or in combination, said compatibility. Even a seemingly insignificant change in the layer can cause a loss of adhesion and can render the composite useless. The compositions disclosed by the art cited by the Examiner differs considerably from each other and as such a person of ordinary skill in the art would not have reasonably expected that a layer which is made from the composition of one of the cited art references could have been successfully mated with a second (or more) cited art composition and subsequently practiced the instant invention.

Further still, Applicants reassert their previous arguments of record. In regards to Applicants previous arguments, the Examiner disputes Applicants assertion that none of the cited art suggests replacing ABS substrate with ASA substrate and goes on to state on page 13, "[t]he Examiner notes the rejection never relied upon the art to provide said motivation." Thus, since there no motivation in the cited art nor has the Examiner provided other motivation, there is no basis for combining cited art references and Applicants respectfully request withdrawal of all \$103 rejections requiring a combination of cited art references as they relate to the aforementioned subject matter.

As the Examiner is well aware, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination or modification. (In re Mills, 916 F.2d 680 (Fed. Cir. 1990)) (emphasis added). Further, this suggestion or motivation to combine or modify must have existed before the date of invention. A failure to provide said motivation or suggestion to

combine or modify said cited art references will create a presumption that the combination or modification of the references selected by the Examiner to support the obviousness rejection were based on hindsight. (*In re Rouffett*,149 F.3d 1350 (Fed. Cir. 1998)).

Moreover, since the Examiner has explicitly stated that the suggestion did not come from the cited art, it appears that the Examiner has impermissibly attempted to piece together the claimed invention using the instant Claims as a guide picking and choosing elements to fit an obviousness rejection. As the court stated in *In re Fritch*, "[i]t is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teaching of the prior art so that the claimed invention is rendered obvious."

Accordingly, Applicants respectfully submit that a prima facie case has not been established and favorable action is solicited.

For at least the reasons listed above, Applicants respectfully request withdrawal of the instant §103 rejections and favorable action is solicited.